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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 18, 2000

Richard Pick, President & CEO
Canyon Fuel Company, LLC
6955 Union Park Center, Suite 540
Salt Lake City, Utah 84047

Re: Deficiencies in Application for Constructing Water Supply Well, Canyon Fuel Company, LLC., Dugout Canyon Mine, ACT/007/039-AM99G, Outgoing Folder

Dear Mr. Pick:

The Division has completed a technical analysis (TA) of your application to construct a water supply well at the Dugout Canyon Mine. A copy of the TA is enclosed for your records. The purpose of this TA is to determine the technical adequacy of your application. As you will note, there are areas of deficiency in your application that prevent us from approving it at this time.

Please review the TA carefully to make sure you understand the concerns. The deficiencies will need to be adequately addressed before your application can be approved. In order for us to further process your application, please provide a response by no later than February 14, 2000.

Please call if you have any questions.

Sincerely,

for Daron R. Haddock
Permit Supervisor

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Enclosure
cc: Ken Payne, Canyon Fuel, Scofield
Chris Hansen, Canyon Fuel, Scofield
Price Field Office
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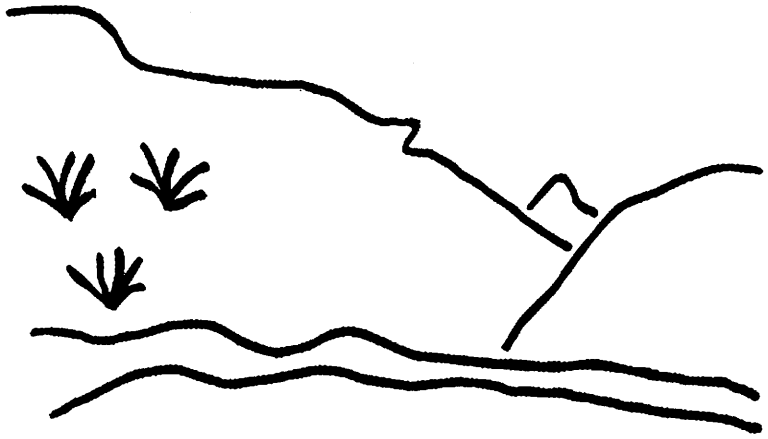
State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Dugout Canyon Mine

Water Supply Well Construction
ACT/007/039-AM99G
Technical Analysis
January 14,2000

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-220, -301-411.

Analysis:

Soil Survey Information

Chris Hansen of EarthFax Engineering, Inc., gathered the soil resource information. A qualification statement for performing the Dugout Canyon soil survey and a personal resumé are provided in Appendix 2-3, Soil Test Pit Logs.

Undisturbed Soils

The concrete pad will cover undisturbed soil and rocky outcrop with non-existant soil. The well site will cover 2000 sq. ft. of undisturbed soil which `lies in a stranded flood plain bench above the stream at the toe of a colluvium covered slope,' (see Drawing Ge 4 B001).

One soil pit was dug to a depth of five feet. The results of soil analysis for test pit 17 are shown in Table 2-1. However, this submittal does not contain Attachment A "Technical Field Visit Report" or Attachment B "Exhibit A of Appendix 2-8" or Attachment C "Soils Log for Test Pit TP-17" or Attachment D "TP-17 Soil Samples" Laboratory Data Sheets.

Test pit 17 (as described in Table 2-1) is a sandy loam soil with 19% coarse fragments in the surface 1.7 inches. The coarse fragments drop to less than 1% for the next 44 inches and then rise to 4.7%. A buried "A" horizon is found at 29.5 inches. The texture of the 29.5 to 31.0 inch buried "A" horizon is loam; it has the best water holding capacity and highest saturation percentage i.e. 9.3 AWH compared with less than 5 AWH and 43.6% compared with less than 33.2%. Below this narrow band of loam is sandy clay loam to a depth of 60 inches.

The Third Order Carbon Co. Survey (SCS, 1988) places the soil in the Rock Outcrop Rubbleland-Travessilla Complex. Mr Hansen identifies the soil after sampling as TS soil which is described on Plate 2-2 as `native or surficially disturbed soil' and on page 2-5 of the MRP as `loamy mixed Typic Haploboroll.' As described the TS soil appears to have approximately 30% gravel size rock fragments throughout the profile. Cobbles and sand increase in the "C" horizon (from 28 inches downward).

From what has been presented in the plan, the soil in test pit 17 is similar to the TS soil in that it has a neutral pH and low EC and SAR values. However, it has a much finer texture than the TS soil and does not possess the characteristic coarse fragments of the TS soil.

Perhaps the best description of the TS soil is found in the Dugout Mine TA:

The undisturbed soils were identified by the Order-I survey as part of the SCS listed soil unit Datino Variant complex, and were given the distinction "Soil Type TS." According to the SCS Carbon County soils survey, the Datino Variant soil complex is characterized as very deep, well drained, moderate permeable soils on mountain slopes being formed in colluvium derived dominantly from sandstone and shale. The SCS survey defines Datino Variant soils as loamy-skeletal, mixed Typic Haploborolls. The typic subgroup of Haploborolls[1] is defined as freely drained soils with a moderately thick brownish mollic epipedon. Typic Haploborolls were formed in alluvium during the late-Pleistocene or Holocene ages, do not have a shallow lithic (stone) contact, and do not have deep wide cracks in most years. The USDA handbook further states that where slopes are suitable, Haploborolls are mostly under cultivation.

Undisturbed TS soils, as represented by soil test pits TP-1, 4, 5, 6, 7, 8, 9, 14, and 14A, are found on both sides of Dugout Creek in the northeastern portion and in the southwestern portion of the facilities area. The TS soils are found in flat lying areas and on slopes with grades up to 40 percent or more. The soil supports vegetation consisting of sage, cottonwood, gambel oak, grass, pinyon, and fir. Information condensed from soil test pit TP-4, TP-6 and lower sections of pit TP-1 show soil horizons O1 (1 inch), A1 (1 to 5 inches), B2 (5 to 14 inches), B3 (14 to 28 inches), and C (28 inches to 9 feet). Portions of TP-5 and TP-8 soil profiles appear to have been reworked by Dugout Creek; the upper four feet of TP-1 soil profile appear disturbed. Undisturbed Type TS soils have acceptable physical and chemical characteristic results consistent with requirements outlined by DOGM's soil and overburden guidelines as recorded in Table 2-1.

Other undisturbed soils located within the Disturbed Area Boundary and described by the SCS soils Order-III survey include Croydon loam, Comodore-Datino Variant complex, and Rock Outcrop-Rubbleland-Travessilla complex soils.

Several questions remain unanswered by this submittal:

- What is the proximity of the proposed disturbance to the stream?
- Will the site be subject to flooding?
- What is the slope of the site?
- How will soils be stabilized during operations?

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-222, Complete Appendix 2.8 with all Attachments and Exhibits.

[1]Soil Conservation Service, U.S. Department of Agriculture, Agriculture Handbook No.436, pp 288-289.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil and Subsoil Removal

Soil will be salvaged to a depth of eighteen inches. The "O","A", "B", and "C" horizons will be combined. The buried horizons will not be salvaged.

The Dugout TA reports that 26,887 CY of salvaged soil will be used to reclaim 14.7 disturbed acres at the Dugout mine. This is an average of 13.6 inches over the entire site. The Dugout Mine would benefit from salvaging the topsoil from this site down to and including the buried "A" horizon, 31.5 inches deep. This buried horizon has the best texture, water holding capacity and the best saturation percentage of the entire profile. Salvaging this buried horizon would add 83 CY of topsoil to the storage pile to be used over the mine site.

Topsoil Storage

An estimated 111 CY will be salvaged and transported to the soil storage yard at the Soldier Canyon Mine.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-232.500, Salvage soil down to 32" to include the buried "A" horizon.

MAPS, PLANS, CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: R645-301- 521.100

Analysis:

Mining Facilities Maps

The permittee did not update the surface facilities map showing the well and installation locations.

Findings:

Information (map) was not provided in the submittal and, therefore, the proposed amendment is not considered adequate to meet the requirement of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-521.100, Update the surface facilities to show pump and well installation. The map will need to be certified by a registered professional engineer.

HYDROLOGIC INFORMATION

Regulatory Reference: R645-301-742

Analysis:

Diversions

The water well pad is located between the road and Dugout Creek with the pad being constructed with a bin wall. The creek will need to be shortened slightly to accommodate the construction and (per telephone conversation) will not use a culvert. This point needs to be clarified on the drawings.

The ditch design for DD-14 and DD-15 used the 10-year, 24-hour design which is consistent with the Division position paper regarding ditches and culverts draining to a sediment pond and exceeds regulation requirements. In this case the ditches drain to the creek which conforms to regulatory recommendations by diverting runoff away from disturbed areas. Where the slope is less, 6.7%, the ditches are unlined and all other, steeper, sections are concrete lined. The watershed areas, runoff numbers, and Manning roughness coefficients were all checked and found to be appropriate. It appears the ditches are adequately designed. There is, however, confusion on just where the different segments of ditch are located. The submitted Drawings No. GE4B001 and B-346 have no ditches shown. The original Plate 7-5, Disturbed Area Diversions, shows DD-14 and DD-15, but no water well pad. Since this needs to be designated for construction and for Division Inspectors to inspect for compliance, it will be necessary to submit a new, revised Plate 7-5. There are other drawings that should be updated to show the new water well pad.

There are a couple typographic errors. Page 53 has the page number cut off which will make filing difficult. The C2 form indicates to replace page 7-82, while page 7-85 appears to be the page to be replaced.

Findings:

The submittal does not meet minimum regulatory requirements. Accordingly, the Permittee must address those deficiencies as found within this Technical Analysis and provide the following in accordance with the requirements of:

R645-301-730; Provide revised drawings to show the water well pad location, in particular Plate 7-5. Identify, on the drawing, where concrete-lined ditch segments are located and where they are unlined. Clarify the nature of the stream realignment at the pad. Show the ditches on Drawings No. GE4B001 and No. B-346. Correct typographic errors.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Soil Redistribution

Page 2-40 indicates that 18 inches of topsoil will be returned to the well site at reclamation. On page 2-31, Appendix 7-8 is referred to as the location of volume calculations. However, App 7-8 is actually titled "Sediment Pond Design." This is probably a typographical error that should say App 2-8.

The report from the technical site visit dated 6/22/99 indicates that the area is riparian in nature. Upon reclamation, it should receive the considerations given to other riparian sites.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-121.200, correct the typographical error on page 2-31 to indicate the correct location of volume calculations for the well site.

R645-301-353.100, include the well site in riparian restoration plans within the MRP.

BOND AND INSURANCE

Regulatory Reference: R645-301-830

Analysis:

Bonding

The permittee did not include this amendment in the bonding calculations.

Finding:

The information provided is not considered adequate and, therefore, the permittee must provide the following in accordance with:

R645-301-830, The permittee must update the bonding section to include the installation of the well and pumping facilities. Also, the contingency section of the bond will need to be adjusted.